

GUSTAFSON
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November 17, 2005

REMARKS

Entry of the amendment, reconsideration, and allowance of the subject application are respectfully requested.

Applicant's representative thanks Mr. Chuck Kyle and Ms. Debra Charles for the courtesies extended during the interview conducted on December 16, 2005. During the interview, Applicant's representative pointed out reasons why the claims were clear, statutory, and patentable over the applied references. Mr. Kyle recommended that an after final response be filed. Applicant requests that both Mr. Kyle and Ms. Charles review this response in light of the presentation and distinctions offered during the interview.

The Information Disclosure Statement filed on January 27, 2003 still requires acknowledgement by the Examiner. An initialed copy of the reference citation list is requested with the next communication from the office.

In numbered paragraph 2 of the official action, the Examiner raises a question (but makes no rejection) about who the trading system in claim 11 is for. Although the specification describes practical examples where the trading system is for electricity producers, distributors, investors, and speculators, the claim is not limited to a particular user—nor should it be. The fact is that the claim sufficiently clear and understandable without having to recite who uses the trading system.

Claims 16 and 25 seem to be objected to for non-statutory subject matter reasons, although no statement of rejection is made. These claims certainly provide a useful, concrete, and tangible result—the standard endorsed by the *State Street Bank* case and recently affirmed in the Board's decision in *Ex parte Lundgren* and the just-issued USPTO guidelines regarding section 101. For example, claim 16 is an apparatus claim and recites a number of concrete

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elements. The end result is useful and tangible since the end consumer is provided with valuable information that will allow the electricity consumer (not necessarily a trader) to have some impact on the prices charged for electricity based on the current electricity contract prices being traded on the electricity trading market. A more efficient electricity trading market that accurately reflects the economics of supply and demand is also of great tangible benefit.

Regarding claim 20, the settlement performed is payment for electricity used or reward for electricity not used. See Figures 4 and 5 and the accompanying description.

Claim 21 clearly states that the control equipment is connected to the communication system so that it receives the price information and further enables the consumer to vary the consumption based on the price information. The breadth of a claim does not make it unclear.

All claims stand rejected for obviousness under 35 U.S.C. §103 based on the combination of Shepherd and Frew. This rejection is respectfully traversed.

As explained during the interview, the electricity contracts trading market is a unique market. First, electricity production, distribution, and pricing is a unique among commodities. Traditionally, large companies (private and/or governmental) have had monopolies in different regions (towns, states, countries, etc) with respect to electricity production, distribution, and pricing rather the normal competitive supply and demand economic models that govern most commodities. In this way, electricity contracts are different from, for example, corn or wheat contracts. Even though these monopolies in recent years may have loosened up, there has been no incentive to the end consumer to change his/her own electricity use based on current market conditions for electricity. Electricity producers are still able, given their monopoly power, to establish a real time price for electricity that does not reflect their true electricity production costs. Consequently, such producers can inflate the electricity price.

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A second unique problem associated with electricity as a commodity is the need to simultaneously consume the electricity once it is produced. Variations in supply and/or demand must be balanced. For example, during peak power consumption moments, only those producers having an additional capacity can actually offer electricity. As a result, those producers can place any price on the offered electricity contract, and neither the moderator nor the consumer has any choice but to accept that price since it is unrealistic to expect consumers to simply shut off their electricity. This also results in high volatility in the electricity auction market.

Shepherd's contract trading system for trading risk contracts does not address these fundamental issues uniquely related to electricity. In fact, Shepherd says nothing about electricity. The Examiner admits that Shepherd lacks "means for connecting each consumer with said price dissemination unit to enable each consumer to receive said price information" and "means for enabling each consumer to vary the consumer's electricity consumption based on the received price information." But Shepherd also lacks the claimed price dissemination unit connected to the trading system. For example, claim 11 recites: "a price information dissemination unit, connected to said first trading system, for distributing price information corresponding to prices for the electricity contracts traded in the trading system."

Frew discloses a utility meter system where various metering information is displayed on an outdoor meter for the meter service person 40 and an indoor meter for the resident. The meter displays such things as present kilowatts being used and current cost of the utility services used. The meter service person 40 carries a meter reader 42 to retrieve or modify information in the meter.

The Examiner makes no attempt to identify in either Shepherd or Frew corresponding elements by reference numeral or specific relevant lines of text for each element recited in the

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claims. Consequently, Applicant is unsure what the basis of the rejection is. Copying several columns of text from Frew without explaining where each claim element is disclosed does not provide any guidance. But even absent such identification and explanation, it is plain that the rejection must be withdrawn.

Even if Shepherd and Frew could be combined for argument's sake, their combination would not disclose the features recited in the independent claims. For example, neither reference discloses the claimed *price information dissemination unit* recited in claim 11 "*connected to said first trading system, for distributing price information corresponding to prices for the electricity contracts traded in the trading system.*" Nor do they teach each electricity consumer being connected in some fashion with that price dissemination unit "to enable each consumer to receive set price information." Shepherd and Frew simply do not disclose any means for distributing price information to a consumer of electricity and electricity distribution system. There certainly is no teaching in either reference of "means for enabling each consumer to vary electricity consumption based on the received price information." The meter in Frew simply allows the user to see what the electricity costs and how much the electricity has been consumed. The user does not know anything about the prices electricity contracts are being traded for. Frew's users are ignorant to the current market conditions and trends for electricity, and there is little the user can do to intelligently vary the amount and timing of electricity consumption based on market conditions that ultimately impacts the price paid for electricity contracts. Thus, the combination of Shepherd and Frew lacks multiple features of independent claim 11.

Independent claim 16 is directed to a price dissemination unit "for disseminating electricity price information to a number of consumers of electricity connected an electricity network." No such price information dissemination unit is disclosed or suggested in either

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Shepherd or Frew. Both references also lack the recited means elements in claim 16.

Independent claims 20, 21, and 25 are also patentable over the combination of Shepherd and Frew for the reasons set forth above.

In addition to the missing claim elements in the combined teachings of Shepherd and Frew, there is no reasonable motivation to combine their teachings. Shepherd's risk contract trading system is silent with respect to electricity contracts. Frew describes an electricity meter. Nothing in either reference suggests a good reason why a trading system should be hooked up to consumer meters. Indeed, they are both directed to entirely different technological fields and very different problems. Neither reference even hints at a possibility that they could be combined.

The Examiner motivates the combination by stating that the "motivation to combine these references is to facilitate direct contact trading of electricity contracts and accurate pricing information to encourage efficient use of electricity." Where did that motivation come from? Certainly not a prior art reference. Just by looking that the meter output, the consumer in Frew is encouraged to use electricity more efficiently. Shepherd's risk contract trading system does not provide any encouragement to use electricity—let alone more efficiently. Nor does the Examiner ever indicate how to combine Frew's metering with Shepherd's risk contract trading system.

The fact that neither Shepherd nor Frew recognizes or addresses the problem to which the present invention is directed is a significant factor that reinforces the conclusion that the Examiner's obviousness rejection is improper and should be withdrawn. As the Federal Circuit has explained:

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The Examiner must show reasons that the skilled artisan, confronted with the same problem as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for the combination in the manner claimed.

In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

As explained above, one of the problems that the inventor wanted to solve was the fact that only producers currently have an impact on the electricity market. The inventor's solution was to design a new infrastructure for distributing electricity where both consumers and producers have an impact on that electricity market. Neither Shepherd nor Frew describes or indicates any advantage with allowing consumers to have such influence.

Neither Shepherd nor Frew addresses the fact that electricity must be produced and consumed simultaneously, which requires real-time, accurate control of production and distribution. This electric power balancing must take place under widely different circumstances and at various time during the day and night, summer, winter, etc. Despite relatively stable general trends for electricity production and consumption, there are still small, unpredictable, and rapid variations from the general trend. In peak power demand, producers are often required to have power generation sites that can be used to provide electricity even if they are used only a few hours during the year. That backup, additional electricity generation during peak periods is very expensive, and its high price affects the overall price for all power generated during that period--irrespective of the power source. As a result, all consumers must pay a high price for a brief period of increased power demand required by only a fraction of all consumers. This situation also causes significant fluctuations in the electricity market. In other words, there is a "chain reaction" affect where high volatility on the balancing market causes high volatility on the

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day ahead ("spot") market which also impacts the electricity's futures market (long-term contracts). Ultimately, the end consumer pays for this volatility.

But with the technology described in the application, electricity consumers can respond to an increase in electricity price by reducing their electricity use. Even a minor reduction in electricity use will rapidly impact the electricity demand during peak periods. That reduced demand may be sufficient so that additional power generation may become unnecessary, which in turn, eliminates the associated price peak. All consumers benefit both from reduced costs and reduced volatility. A more stable market attracts more traders, thus increasing liquidity and driving the electricity market towards efficient market prices for electricity.


Neither Shepherd nor Frew recognizes the above-described problems, proposes a solution to those problems, or recognizes the benefits that come from resolving those problems. Indeed, the technology described in this application both benefits the end consumer and creates a much more efficient and effective electricity market.

The application is in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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